

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

A2

1. (currently amended) A color printer for printing to a photosensitive medium comprising:

- a first light source for generating a first color beam;
- a first modulator for modulating said first color beam;
- a second light source for generating a second a color beam;
- a second modulator for modulating said second color beam;
- a third light source for generating a third color beam;
- a third modulator for modulating said third color beam;
- at least a fourth light source for generating a fourth color beam;
- a fourth modulator for modulating at least said fourth color beam; and

wherein a polarization of said fourth modulated beam is orthogonal to a polarization of said third modulated beam; and

an optical system for combining and imaging said modulated beams onto said photosensitive medium.

2. (original) A color printer as in claim 1 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.

3. (original) A color printer as in claim 1 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

4. (original) A color printer as in claim 1 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.

5. (original) A color printer as in claim 1 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.

6. (original) A color printer as in claim 1 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

7. (original) A color printer as in claim 1 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.

8. (currently amended) A color printer as in claim 1 wherein said photosensitive medium is a photographic print film having at least four sensitive layers.

9. (currently amended) A color printer as in claim 1 wherein said photosensitive medium is a photographic reversal film having at least four sensitive layers.

10. (original) A color printer as in claim 1 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

11. (currently amended) A color printer as in claim 1 wherein said modulators are reflective liquid crystal diodes (LCDs)~~LCDs~~.

12. (currently amended) A color printer as in claim 1 wherein said modulators are transmissive liquid crystal diodes (LCDs)~~LCDs~~.

13. (original) A color printer as in claim 1 wherein said modulators are digital micromirror devices.

14. (original) A color printer as in claim 1 wherein said modulators are gated light valves.

15. (original) A color printer as in claim 1 wherein said modulators are acousto-optic.

16. (currently amended) A color printer as in claim 1 wherein said modulators are comprised of electro-optic modulators and ~~polygon scanners~~.

17. (original) A color printer as in claim 1 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, blue-green, blue, and ultra-violet lasers.

18. (original) A color printer as in claim 1 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.

19. (currently amended) A color printer as in claim 1 wherein each of said light sources are comprised of an array of light sources, wherein light sources in each array are selected from a group comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, blue LED, and ultra-violet LED.

20. (original) A color printer as in claim 1 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.

21. (canceled)

22. (canceled)

23. (canceled)

24. (currently amended) A method of printing to a photosensitive medium comprising:

generating a first color beam;
modulating said first color beam;
generating a second color beam;
modulating said second color beam;
generating a third color beam;
modulating said third color beam;
generating at least a fourth color beam;
modulating at least said fourth color beam; ~~and~~
wherein said third modulated color beam and said fourth modulated color beam are orthogonally polarized; and
~~an optical system for combining and imaging said~~
modulated beams onto said photosensitive medium.

25. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.

26. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

27. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.

28. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.

29. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

30. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.

31. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive photographic print film having at least four sensitive layers.

32. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive photographic reversal film having at least four sensitive layers.

33. (currently amended) A ~~color printer~~ method as in claim 24 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

34. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are reflective LCDs.

35. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are transmissive LCDs.

36. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are digital micromirror devices.

37. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are gated light valves.

38. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are acousto-optic.

39. (currently amended) A ~~color printer~~ method as in claim 24 wherein said modulators are electro-optic modulators, wherein combined light beams from said modulators are deflected by ~~combined with~~ polygon scanners.

40. (currently amended) A ~~color printer~~ method as in claim 24 wherein ~~said at least one light sources are~~ source is selected from a group comprised of infra-red, red, green, yellow-green, blue-green, blue, and ultra-violet lasers.

41. (currently amended) A ~~color printer~~ method as in claim 24 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, blue LED array, and an ultra-violet LED array.

42. (currently amended) A ~~color printer~~ method as in claim 24 wherein each of said light sources are comprised of an array of infra-red LEDs or ~~LED~~, red LEDs or ~~LED~~, green LEDs or ~~LED~~, blue-green LEDs or ~~LED~~, yellow-green LEDs or ~~LED~~, blue LEDs or ~~LED~~, ~~and an~~ ultra-violet LEDs ~~LED~~.

43. (currently amended) A ~~color printer~~ method as in claim 24 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.

44. (currently amended) A color printer for printing to a photosensitive medium comprising:

- a first light source for generating a first color beam;
- a first modulator means for modulating said first color beam;
- a second light source for generating a second a color beam;
- a second modulator means for modulating said second color beam;
- a third light source for generating a third color beam;
- a third modulator means for modulating said third color beam;

at least a fourth light source for generating a fourth color beam;

a fourth modulator means for modulating at least said fourth color beam; ~~and~~

wherein said third modulated color beam and said fourth modulated color beam are orthogonally polarized; and

an optical system for combining and imaging said modulated beams onto said photosensitive medium.

45. (original) A color printer as in claim 44 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.

46. (original) A color printer as in claim 44 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

47. (original) A color printer as in claim 44 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.

48. (original) A color printer as in claim 44 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.

49. (original) A color printer as in claim 44 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

50. (original) A color printer as in claim 44 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.

51. (original) A color printer as in claim 44 wherein said photosensitive photographic print film having at least four sensitive layers.

52. (original) A color printer as in claim 44 wherein said photosensitive photographic reversal film having at least four sensitive layers.

53. (original) A color printer as in claim 44 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

54. (original) A color printer as in claim 44 wherein said modulators are reflective LCDs.

55. (original) A color printer as in claim 44 wherein said modulators are transmissive LCDs.

56. (original) A color printer as in claim 44 wherein said modulators are digital micromirror devices.

57. (original) A color printer as in claim 44 wherein said modulators are gated light valves.

58. (original) A color printer as in claim 44 wherein said modulators are acousto-optic.

59. (original) A color printer as in claim 44 wherein said modulators are electro-optic modulators combined with polygon scanners.

60. (original) A color printer as in claim 44 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, blue-green, blue, and ultra-violet lasers.

61. (original) A color printer as in claim 44 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, blue LED array, and an ultra-violet LED array.

62. (currently amended) A color printer as in claim 44 wherein each of said light sources are comprised of an array of infra-red LEDs or LED, red LEDs or LED, green LEDs or LED, blue-green LEDs or LED, yellow-green LEDs or LED, blue LEDs or LED, and an ultra-violet LEDs LED.

63. (original) A color printer as in claim 44 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.

64. (currently amended) A color printer for printing to a photosensitive medium comprising:

- a plurality first light ~~source~~ sources for generating a first color beam;
- a plurality second light ~~source~~ sources for generating a second a color beam;
- a plurality third light ~~source~~ sources for generating a third color beam;
- at least a fourth light source for generating a fourth color beam;
- wherein said first, second, third, and fourth light sources are arranged as an array of light sources;
- wherein a number of light sources for each color is inversely proportional to a film sensitivity;
- a modulator for modulating said first, second, third, and fourth color beams; and
- an optical system for combining and imaging said modulated beams onto said photosensitive medium.

65. (original) A color printer as in claim 64 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.

66. (original) A color printer as in claim 64 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

67. (original) A color printer as in claim 64 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.

68. (original) A color printer as in claim 64 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.

69. (original) A color printer as in claim 64 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

70. (original) A color printer as in claim 64 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.

71. (currently amended) A color printer as in claim 64 wherein said photosensitive medium is a photographic print film having at least four sensitive layers.

72. (currently amended) A color printer as in claim 64 wherein said photosensitive medium is a photographic reversal film having at least four sensitive layers.

73. (original) A color printer as in claim 64 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

74. (original) A color printer as in claim 64 wherein said modulator is a reflective LCD.

75. (original) A color printer as in claim 64 wherein said modulator is a transmissive LCD.

76. (original) A color printer as in claim 64 wherein said modulator is a digital micromirror device.

77. (original) A color printer as in claim 64 wherein said modulator is a gated light valve.

78. (original) A color printer as in claim 64 wherein said modulator is an acousto-optic.

79. (original) A color printer as in claim 64 wherein said modulator is an electro-optic modulator.

80. (original) A color printer as in claim 64 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, blue-green, blue and ultra-violet lasers.

81. (original) A color printer as in claim 64 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.

82. (currently amended) A color printer as in claim 64 wherein each of at least one of said light sources are comprised is selected from a group comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, a blue, and an ultra-violet LED.

83. (original) A color printer as in claim 64 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.

84. (original) A color printer as in claim 64 wherein said optical system includes at least one raster scanning device selected from a group comprising:

a polygon, a hologon, or a galvanometer.

85. (currently amended) A method of printing to a photosensitive medium comprising:

generating a first color beam;

generating a second color beam;

generating a third color beam;

generating at least a fourth color beam;

wherein each of said first, second, third, and fourth color beams are generated sequentially;

modulating and combining said first, second, third, and fourth color beams; and

~~an optical system for~~ imaging said modulated beams onto said photosensitive medium.

86. (currently amended) A color printer for printing to a photosensitive medium comprising:

a light source for generating a first color beam, a second color beam, a third color beam, and a fourth color beam;

wherein each of said first, second, third, and fourth color beams are generated sequentially;

a modulator for modulating said color beams; and

an optical system for imaging said modulated beams onto said photosensitive medium.

87. (original) A color printer as in claim 86 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.

88. (original) A color printer as in claim 86 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

89. (original) A color printer as in claim 86 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.

90. (original) A color printer as in claim 86 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.

91. (original) A color printer as in claim 86 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

92. (original) A color printer as in claim 86 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.

93. (currently amended) A color printer as in claim 86 wherein said photosensitive medium is a photographic print film having at least four sensitive layers.

94. (currently amended) A color printer as in claim 86 wherein said photosensitive medium is a photographic reversal film having at least four sensitive layers.

95. (original) A color printer as in claim 86 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

96. (original) A color printer as in claim 86 wherein said modulator is a reflective LCD.

97. (original) A color printer as in claim 86 wherein said modulator is a transmissive LCD.

98. (original) A color printer as in claim 86 wherein said modulator is a digital micromirror device.

99. (original) A color printer as in claim 86 wherein said modulator is a gated light valve.

100. (original) A color printer as in claim 86 wherein said modulator is an acousto-optic.

101. (original) A color printer as in claim 86 wherein said modulator is an electro-optic modulator.

102. (original) A color printer as in claim 86 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, blue-green, blue, and ultra-violet lasers.

103. (original) A color printer as in claim 86 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.

104. (currently amended) A color printer as in claim 86 wherein each of said light sources are comprised of an array of infra-red LEDs or LED, red LEDs or LED, green LEDs or LED, blue-green LEDs or LED, yellow-green LEDs or LED, blue LEDs or LED, and an ultra-violet LEDs LED.

105. (original) A color printer as in claim 86 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.

106. (original) A color printer as in claim 86 wherein said optical system includes at least one raster scanning device selected from a group comprising:

a polygon, a hologon, or a galvanometer.

107. (canceled)

108. (canceled)

109. (canceled)

110. (currently amended) A color printer for printing to a photosensitive medium comprising:

a first light source for generating a first color beam;
a first shutter for interrupting said first color beam;
a second light source for generating a second color beam;
a second shutter for interrupting said second color beam;
a third light source for generating a third color beam;
a third shutter for interrupting said third color beam;
a fourth light source for generating a fourth color beam;
a fourth shutter for interrupting said fourth color beam;
wherein said photosensitive medium is comprised of at

least four photosensitive layers and wherein each of said four photosensitive layers are sensitive respectively to each of said first, second, third, and fourth color beams;

a modulator for modulating said first, second, third, and fourth color light beams sequentially; and

an optical system for imaging said modulated beams onto said photosensitive medium.

111. (new) A color printer as in claim 1 wherein said optical system comprises an x-cube.